

**EXHIBIT A**  
**LISTING OF ALL CLAIMS AND AMENDMENTS**  
**(12-21-2005)**

**Amendments to the Claims**

**Claim 1 (currently amended)**

1. A system for transferring a hardware independent service request between a client application and at least one of a plurality of a-supported motion control system-systems using a communications network, comprising:

- a client build module for building a service request envelope for containing the hardware independent service request, where the hardware independent service request is associated with a service performed by the motion control system, and the client build module transmits the service request envelope across the communications network;
- a service request format module for extracting the hardware independent service request from the service request envelope, converting the hardware independent service request into a hardware independent service request method, and invoking the hardware independent service request method; wherein
- the motion control system comprises a motion services module that converts the hardware independent service request method into a-at least one hardware dependent motion command, where a format of the at least one hardware dependent motion command is determined based on at least one motion control system selected from the plurality of supported motion control systems; and
- the motion control system operates in response to the hardware dependent motion command to perform the service associated with the service request.

**Claim 2 (previously presented)**

2. A system as recited in claim 1, in which the service request format module receives a return value from the motion control system in response to the service request, builds a response envelope containing the return value, and transmits the response envelope to the client application.

**Claim 3 (previously presented)**

3. A system as recited in claim 1, in which the service request format module invokes the service request method on the motion control system across a communications network.

**Claim 4 (previously presented)**

4. A system as recited in claim 1, in which the service request format module invokes the service request method on the motion control system across a process boundary.

**Claim 5 (previously presented)**

5. A system as recited in claim 1, in which the service request format module invokes the service request method on the motion control system within a single process.

**Claim 6 (previously presented)**

6. A system as recited in claim 1, further comprising a packaging module that converts the service request into a service request method.

**Claim 7 (previously presented)**

7. A system as recited in claim 1, further comprising a data format module that converts service request data between a first data format associated with the communications network and a second data format associated with the motion control system.

**Claim 8 (previously presented)**

8. A system as recited in claim 1, further comprising a method discovery module for determining a set of services supported by the motion control system.

**Claim 9 (previously presented)**

9. A system as recited in claim 1, further comprising a data management module between the client build module and the service request format module, where the data management module manages service requests.

**Claim 10 (previously presented)**

10. A system as recited in claim 9, in which the data management module further routes service requests to a database for persistent storage.

**Claim 11 (previously presented)**

11. A system as recited in claim 10, further comprising a data caching module for processing data stored in the database.

**Claim 12 (previously presented)**

12. A system as recited in claim 7, further comprising:  
a data management module between the client build module and the service request format module, where the data management module manages service requests;  
a database for persistently storing services requests; and  
a data caching module for processing data stored in the database.

**Claim 13 (new)**

13. A system for transferring a hardware independent service request between a client application and at least one of a plurality of supported motion control systems using a communications network, comprising:

a client build module for building a service request envelope for containing the hardware independent service request, where the hardware independent service request is associated with a service performed by the motion control system, and the client build module transmits the service request envelope across the communications network;

a service request format module for extracting the hardware independent service request from the service request envelope, converting the hardware independent service request into a hardware independent service request method, and invoking the hardware independent service request method; wherein

the motion control system comprises a motion services module that converts the hardware independent service request method into at least one hardware dependent motion command, where the hardware independent service request method conforms to a programming interface common to the supported motion control systems; and

the motion control system operates in response to the hardware dependent motion command to perform the service associated with the service request.

**Claim 14 (new)**

14. A system as recited in claim 13, in which the service request format module receives a return value from the motion control system in response to the service request, builds a response envelope containing the return value, and transmits the response envelope to the client application.

**Claim 15 (new)**

15. A system as recited in claim 13, in which the service request format module invokes the service request method on the motion control system across a communications network.

**Claim 16 (new)**

16. A system as recited in claim 13, in which the service request format module invokes the service request method on the motion control system across a process boundary.

**Claim 17 (new)**

17. A system as recited in claim 13, in which the service request format module invokes the service request method on the motion control system within a single process.

**Claim 18 (new)**

18. A system as recited in claim 13, further comprising a packaging module that converts the service request into a service request method.

**Claim 19 (new)**

19. A system as recited in claim 13, further comprising a data format module that converts service request data between a first data format associated with the communications network and a second data format associated with the motion control system.

**Claim 20 (new)**

20. A system as recited in claim 13, further comprising a method discovery module for determining a set of services supported by the motion control system.

**Claim 21 (new)**

21. A system as recited in claim 13, further comprising a data management module between the client build module and the service request format module, where the data management module manages service requests.

**Claim 22 (new)**

22. A system as recited in claim 21, in which the data management module further routes service requests to a database for persistent storage.

**Claim 23 (new)**

23. A system as recited in claim 22, further comprising a data caching module for processing data stored in the database.

**Claim 24 (new)**

24. A system as recited in claim 19, further comprising:  
a data management module between the client build module and the service request format module, where the data management module manages service requests;  
a database for persistently storing services requests; and  
a data caching module for processing data stored in the database.